

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/JP2004/012223

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C21D1/76 C23C2/06 C21D8/04

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C21D C23C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 2002, no. 02, 2 April 2002 (2002-04-02) & JP 2001 279412 A (NIPPON STEEL CORP), 10 October 2001 (2001-10-10) abstract	1, 4
A	PATENT ABSTRACTS OF JAPAN vol. 0041, no. 35 (C-025), 20 September 1980 (1980-09-20) & JP 55 085622 A (NIPPON KOKAN KK <NKK>; others: 01), 27 June 1980 (1980-06-27) abstract	1
A	US 2003/047255 A1 (DELAUNAY DIDIER ET AL) 13 March 2003 (2003-03-13) paragraphs '0009!, '0010!, '0017!, '0024! - '0027!	1

-/--

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \* & \* document member of the same patent family

Date of the actual completion of the international search

14 December 2004

Date of mailing of the international search report

13/01/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Lilimpakis, E

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/JP2004/012223

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 13, 5 February 2001 (2001-02-05) & JP 2000 290730 A (KAWASAKI STEEL CORP), 17 October 2000 (2000-10-17) abstract	1, 4
A	----- PATENT ABSTRACTS OF JAPAN vol. 2002, no. 03, 3 April 2002 (2002-04-03) & JP 2001 323355 A (NIPPON STEEL CORP), 22 November 2001 (2001-11-22) cited in the application abstract -----	1

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/JP2004/012223

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 2001279412 A	10-10-2001	NONE	
JP 55085622 A	27-06-1980	JP 59017169 B	19-04-1984
US 2003047255 A1	13-03-2003	FR 2828888 A1	28-02-2003
		BR 0203383 A	20-05-2003
		DE 1285972 T1	18-09-2003
		EP 1285972 A1	26-02-2003
		ES 2188434 T1	01-07-2003
		JP 2003183799 A	03-07-2003
JP 2000290730 A	17-10-2000	NONE	
JP 2001323355 A	22-11-2001	NONE	